UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,348	03/02/2004	Dirk C. De Baer	XP-1172	2427

7590 06/23/2008

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ART UNIT	PAPER NUMBER
2625	

MAIL DATE	DELIVERY MODE
06/23/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *36-56* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *37,39,41,43,45,47,49,51,53 and 55* is/are allowed.

6)☒ Claim(s) *36,38,40,42,44,46,48,50,52,54 and 56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 June 2005 and 20 February 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/20/2008*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 36-56 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2.   Claim 56 is objected to because of the following informalities: replace current claim language with the following-- A computer-readable medium in which is embodied programming which when read by a computer causes the computer to carry out the method of any one of claims 36-55--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 36, 38, 40, 42, 44, 46, 48, 50, 52, 54 and 56 are rejected under 35 U.S.C. 102(e) as being anticipated by Walker et al. (6,967,746).

Regarding claim 36: Walker et al. disclose converting source color data (Fig. 1, input color image data 14) of a source color space (Fig. 1, color space of source device 16, RGB and col. 5, ln. 53-56) to a destination image space (Fig. 1, image space of destination device 20, CMYK and col. 5, ln. 53-59) to produce destination color data (Fig. 1, output data 18 or 26); selecting at least one profile edit (Fig 2, user is allowed to select 52 an ink usage strategy; user selects 57 a gamut

mapping strategy, col. 7, ln. 38-46) and applying said at least one profile edit (Fig 2, user is

allowed to select 52 an ink usage strategy; user selects 57 a gamut mapping strategy, col. 7, ln.

38-46) to the source color data (Fig. 1, input color image data 14) to provide modified source

color data (the transform for the source device to the profile connection space is composed at

step 60 in Fig. 2 with the gamut mapping transform, col. 7, ln. 49-52) and converting the

modified source color data to provide a modified destination color data (this modified destination

transform is then inverted at step 62 in Fig. 2 using as input values coordinates of the modified

source transform, col. 7, ln. 52-53), wherein said at least one profile edit modifies a gamut

mapping (the user selects at step 57 of Fig. 2 a gamut mapping strategy which will map the

source gamut to the destination gamut, col. 7, ln. 45-46) in a color profile (RGB to CMYK as

done in Fig. 2, col. 7, ln. 38-40) to control rendering (producing an output) of the destination

color data (Fig. 1, output data 18 or 26) on a target device (Fig. 1, first destination device 20 or

second destination device 28), said gamut mapping (gamut mapping) being in, or converted to,

look-up table form (interpolation table, col. 7, ln. 7-16), and converting said at least one profile

edit (Fig 2, user is allowed to select 52 an ink usage strategy; user selects 57 a gamut mapping

strategy, col. 7, ln. 38-46) to color spaces of said gamut mapping (the gamut mapping transform

is generated at step 58 in Fig. 2, col. 7, ln. 49) and applying said at least one profile edit (Fig 2,

user is allowed to select 52 an ink usage strategy; user selects 57 a gamut mapping strategy, col.

7, ln. 38-46) as converted to the gamut mapping (gamut mapping strategy) to provide a modified

gamut mapping (the gamut mapping transform is generated at step 58 in Fig. 2, col. 7, ln. 49).

Regarding claim 38: Walker et al. satisfy all the elements of claim 36. Walker et al. further

disclose wherein said at least one profile edit (Fig 2, user is allowed to select 52 an ink usage

strategy; user selects 57 a gamut mapping strategy, col. 7, ln. 38-46) comprises, for all input

points of the gamut mapping (map any color in the source gamut to a color in the destination

gamut, col. 5, ln. 25-27), taking the input point (any color in the source gamut, col. 5, ln. 25-27)

and a corresponding output point thereto (any color in the destination gamut, col. 5, ln. 25-27),

converting the color space of the input point (RGB) to the color space of the profile edit (Fig 2,

user is allowed to select 52 an ink usage strategy; user selects 57 a gamut mapping strategy, col.

7, ln. 38-46) within a color range of the profile edit (Fig 2, user is allowed to select 52 an ink

usage strategy; user selects 57 a gamut mapping strategy, col. 7, ln. 38-46) and applying the edit

to provide a new input point (input values coordinates of the modified source transform, col. 7,

ln. 53-54), applying the gamut mapping (gamut mapping transform, col. 7, ln. 49-52) to the new

input point and modifying the corresponding output point thereby (the output is an inverted

transform which is composed at step 64 of Fig. 2, col. 7, 54-57).

Regarding claim 40: Walker et al. satisfy all the elements of claim 36. Walker et al. further

disclose wherein said at least one profile edit (Fig 2, user is allowed to select 52 an ink usage

strategy; user selects 57 a gamut mapping strategy, col. 7, ln. 38-46) comprises, for all output

points (destination gamut, col. 7, ln. 46) of the gamut mapping (gamut mapping strategy, col. 7,

ln. 45), taking the output point and a corresponding input point thereto, converting the color

space of the input point (RGB) to the color space of the edit (CMYK) and applying the edit (Fig

2, user is allowed to select 52 an ink usage strategy; user selects 57 a gamut mapping strategy,

col. 7, ln. 38-46) to provide a new output point (the output is an inverted transform which is

composed at step 64 of Fig. 2 with the manifold to create the desired device to device transform,

col. 7, ln. 54-57).

Regarding claim 42: Walker et al. satisfy all the elements of claim 36. Walker et al. further

disclose wherein said at least one profile edit (Fig 2, user is allowed to select 52 an ink usage

strategy; user selects 57 a gamut mapping strategy, col. 7, ln. 38-46) comprises collecting all

input points (source gamut -> RGB) of the gamut mapping gamut mapping strategy, col. 7, ln.

45) that affect input data (source gamut) of the edit (Fig 2, user is allowed to select 52 an ink

usage strategy; user selects 57 a gamut mapping strategy, col. 7, ln. 38-46) and, for all output

points (destination gamut) corresponding to the collected input points (mapping source gamut to

destination gamut, col. 7, ln. 45-46), changing output points of the gamut mapping (the output is

an inverted transform which is composed at step 64 of Fig. 2 with the manifold to create the

desired device to device transform, col. 7, ln. 54-57) according to a predetermined criteria

(inverted transform according to all values provided, col. 7, ln. 38-57 and Fig. 2), evaluation of

the gamut mapping (gamut mapping strategy selected by the user) as to input data (source gamut

chosen by user when the gamut mapping strategy was selected, col. 7, ln. 45-48) of the edit as

compared to resulting output (destination gamut chosen by user when the gamut mapping

strategy was selected, col. 7, ln. 45-48) requested by the edit (user can select a gamut mapping

strategy, or this step is not necessary if their preferences are already known, col. 7, ln. 45-48).

Regarding claim 44: Walker et al. satisfy all the elements of claim 36. Walker et al. further

disclose wherein the at least one profile edit (Fig 2, user is allowed to select 52 an ink usage

strategy; user selects 57 a gamut mapping strategy, col. 7, ln. 38-46) comprises, for all input

points of the edit (source gamut selected by user in gamut mapping strategy, col. 7, ln. 45-48),

replacing a corresponding output point (destination gamut) in the gamut mapping (gamut

mapping strategy) by the output point of the edit (destination gamut selected by user in gamut mapping strategy, col. 7, ln. 45-48).

Regarding claim 46: Walker et al. satisfy all the elements of claim 36. Walker et al. further disclose wherein said gamut mapping (user preferences for gamut mapping, col. 7, ln. 32-34) prior to application of said at least one profile edit (Fig 2, user is allowed to select 52 an ink usage strategy; user selects 57 a gamut mapping strategy, col. 7, ln. 38-46) thereto, contains prior applied profile edits (prior user preferences for gamut mapping strategy, col. 7, ln. 46-48).

Regarding claim 48: Walker et al. satisfy all the elements of claim 36. Walker et al. further disclose wherein the user selects a destination color space (user selects a gamut mapping strategy which will map the source gamut to the destination gamut, Fig. 2, step 57 and col. 7, ln. 45-46).

Regarding claim 50: Walker et al. satisfy all the elements of claim 36. Walker et al. further disclose wherein said at least one profile edit is user controlled (user makes selections for ink usage strategy and gamut mapping strategy, col. 7, ln. 40-46).

Regarding claim 52: Walker et al. satisfy all the elements of claim 36. Walker et al. further disclose wherein when said at least one profile edit (Fig 2, user is allowed to select 52 an ink usage strategy; user selects 57 a gamut mapping strategy, col. 7, ln. 38-46) is to the source color data (source gamut) and said edit includes changes to **at least one of** a selective color profile (the resultant transform may be used to process image data..and can be saved to a storage device as an ICC device link profile, col. 7, ln. 30-37), global mapping and gamut mapping (user selects a gamut mapping strategy which will map the source gamut to the destination gamut, col. 7, ln. 45-46).

Regarding claim 54: Walker et al. satisfy all the elements of claim 36. Walker et al. further

disclose wherein said at least one profile edit (Fig 2, user is allowed to select 52 an ink usage

strategy; user selects 57 a gamut mapping strategy, col. 7, ln. 38-46) is to said destination color

data (destination gamut) and includes at least one of a single conversion (RGB to CMYK, col. 7,

ln. 38-46), color ramp curves, shadow contrast and black replacement (black ink usage, col. 7, ln.

30-36).

Regarding claim 56: Walker et al. satisfy all the elements of claim 36. Walker et al. further

disclose (with respect to claims 36, 38, 40, 42, 44, 46, 48, 50, 52 and 54) A system for profile

editing (Fig. 1, a system which can perform the processes of the invention to create a device to

device transform and convert color with the resulting device to device transform, description of

Fig. 1, col. 3, ln. 52-54) comprising a computer-readable medium in which is embodied

programming which when read by a computer (as evidenced by computer 10 shown in Fig. 1)

causes the computer to carry out the method of **any one** of claims 36-55. Arguments analogous

to those stated in the rejection of claims 36, 38, 40, 42, 44, 46, 48, 50, 52 and 54 are applicable

and a computer-readable medium in which is embodied programming which when read by a

computer is inherently taught as evidenced by computer 10 and various memories stored therein.

Allowable Subject Matter

5.   Claims 37, 39, 41, 43, 45, 47, 49, 51, 53 and 55 are allowed.

6.   The following is an examiner's statement of reasons for allowance: claim 37 is allowed

over the prior art of record because the Examiner found neither prior art cited in its entirety, nor

based on the prior art, found any motivation to combine any of said prior art which teaches

-- taking an existing gamut mapping in a color profile, said gamut mapping being

in look-up table (LUT) form or converting said gamut mapping to LUT form, and

modifying said gamut mapping by applying at least one profile edit to one or more color

spaces, said at least one profile edit being made in an empty list of edits or in an existing

list of edits, wherein source color space and destination color space of said gamut

mapping are identified, a profile edit is added to said empty list of edits or said existing

list of edits to set parameters of said empty list or to modify parameters of said existing

list of edits, each of said at least one profile edit being an action on a source color space

of gamut mapping, an action on a destination color space of said gamut mapping or an

action directly on color data of said gamut mapping with said color data relating to a

source color space or a destination color space, to thereby modify the gamut mapping by

applying resulting actions of each of said at least one profile edit and conforming the

gamut mapping thereto.

7.   Walker et al. (6,967,746) disclose a system that uses transformations for a source and

destination device along with user preference information to create a composite transformation.

Walker et al. fail to specifically address the invention as claimed.

8.   Wen (US 2003/0184557 A1) discloses a method and system for managing color gamut

mapping of a digital image from a source gamut to a target gamut through the graphical user

interface. Wen fails to specifically address the invention as claimed.

9.   Kumada et al. (6,459,436) disclose an image processing method and apparatus for

performing color matching according to ambient light. Kumada et al. fail to specifically address

the invention as claimed.

Conclusion

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLOTTE M. BAKER whose telephone number is (571)272-7459. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. M. B./
Examiner, Art Unit 2625
/Edward L. Coles/
Supervisory Patent Examiner, Art Unit 2625